FOSTEX®

HP-P1

PORTABLE
HEADPHONE AMP
& DAC

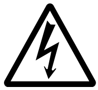
Owner's Manual

8289676000
(525714)

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER - SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

“WARNING”

“TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.”

SAFETY INSTRUCTIONS

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15) Excessive sound pressure from earphones and headphones can cause hearing loss.

FCC (U.S.A.) & ICES-003 (Canada) INFORMATION

1. IMPORTANT NOTICE
This product, when installed as indicated in the instructions contained in this manual, meets FCC and ICES-003 requirements. Changes or modifications not expressly approved by Fostex Company for compliance could void the user' s authority to operate the equipment. DO NOT MODIFY THIS PRODUCT.

2. IMPORTANT
In order to comply with FCC and ICES-003 requirements, use high quality shielded cables for connection to accessories and / or another products. If any cables are supplied with this product, they MUST be used. Follow all installation instructions. Failure to do so could void your FCC / ICES-003 authorization to use this product in the USA / Canada.

3. NOTE
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

4. Compliance with Part 15 of FCC Rules and Canadian ICES-003.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that many cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Table of contents

Introduction

Thank you very much for purchasing the Fostex HP-P1.
To ensure the best performance, read this manual thoroughly before using the unit. Keep this manual handy for future reference.

Overview

The Fostex HP-P1 is the high performance portable headphone amplifier featuring 32-bit stereo DAC.
It converts digital audio signals from your iPod or iPhone into analog audio signals. The converted analog signal is output from the headphone and line output jacks. The DA conversion section employs the newly-developed AKM AK4480, a high performance 32-bit stereo DAC.
The HP-P1 also features the digital-to-digital conversion function that allows to convert iPod or iPhone digital audio data into an S/PDIF signal and feed it from the [S/PDIF] output.

Supplied accessories

The following are supplied with the HP-A3.
- Dock Connector to USB cable x 1
- USB mini-B to USB A cable for battery charging x 1
- Carrying case x 1
- Owner's manual (this manual) x 1

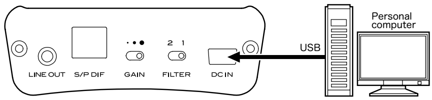
After purchasing the HP-P1, check all the accessories are included in the package.

Power supply

The HP-P1 runs on the lithium-ion battery integrated with in the unit.
You can charge the battery from your personal computer that is USB-connected to the unit.
When you purchase the unit, the battery is not fully-charged. Therefore, it is recommended to fully charge the battery before using.
Note that even when the battery is exhausted, you can use the unit by USB-connecting to your personal computer.

Charging the battery

You can charge the internal battery by USB-connecting a personal computer to the [DC-IN] port (USB mini B) using the supplied USB mini-B to USB A cable.
You can charge the battery even when the power of the HP-P1 is off.



While the battery is being charged, the status indicator on the top panel lights in green. When the battery is fully charged, the indicator turns off.
Note that, if your iPod or iPhone is connected, the indicator lights in orange while the battery is being charged, or lights in red when the battery is fully charged.

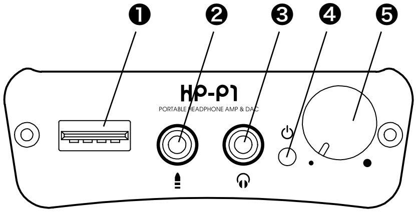
<Memo>:Do not leave the unit in an extremely hot place, such as an overheated car. The battery must be charged in a normal temperature environment.
When the unit is left in a hot or cold place, the status indicator may flash in green for alerting. If the indicator still flashes in green after leaving the unit in a normal temperature environment for about one hour, consult your local Fostex dealer or service station.

Status indicator lighting conditions

Lit in red	When the power is on while an iPod/iPhone is connected.
Lit in green	While charging
Lit in orange	While charging when the power is on and an iPod/iPhone is connected.
Unlit	When the battery is fully charged or when the power is off.

Names and functions

Front panel



❶ USB connector (type A) for Dock Connector to USB cable

Connects an iPod or iPhone using the supplied Dock Connector to USB cable.

<Memo>:When both the analog input jack and USB connector are plugged in, the unit receives only the analog input signal. The USB connector is disabled.

<Note>:Some old iPod or iPhone models do not recognize the HP-P1. See “Connecting an iPod/iPhone” on page E-6 for connectable iPod/iPhone models.

❷ Analog input jack (stereo mini jack)

Connects the analog audio output (or headphone output) of a portable audio player, etc.

❸ Headphone output jack (stereo mini jack)

Connects stereo headphones.

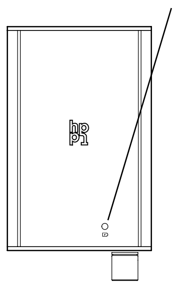
❹ Power indicator

When you turn on the power, this indicator lights in red briefly and then turns to green.
When the battery is exhausted, it lights in red.

❺ Power switch/volume control dial

This dial adjusts the headphone level, as well as switches on or off the power.
When the dial is turned completely counterclockwise, the power is off. By turning the dial clockwise beyond the “click”, the unit is turned on and the headphone level increases by further rotating it clockwise.

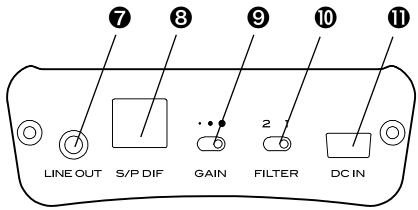
Top panel



❻ Status indicator

When the internal battery is being charged (i.e. a personal computer is connected to the [DC-IN] port and a power is supplied from it), this indicator lights in green.
When the power is on and an iPod or iPhone is connected, the indicator lights in red.
When the internal battery is being charged and an iPod or iPhone is connected, the indicator lights in orange.

Rear panel



❼ [LINE OUT] jack (stereo mini jack)

Outputs an audio source of the HP-P1 (iPod/iPhone audio or analog audio) in analog form. You can connect a recorder or audio amplifier to this jack.

❽ [S/PDIF] output jack (optical)

Outputs the S/PDIF digital signal converted from an iPod or iPhone digital audio signal. You can connect a recorder or amplifier that provides the digital input to this jack.

❾ [GAIN] switch

Switches the gain of the headphone amplifier. See “Gain setting” on page E-8.

❿ [FILTER] switc

Switches the type of the digital filter in the internal DAC. See “Filter setting” on page E-9.

⓫ [DC-IN] port (USB mini B)

You can charge the internal battery by connecting this port to your personal computer using the supplied USB mini-B to USB A cable.

Connecting a sound source

Connecting an iPod/iPhone

Connectable iPod/iPhone models

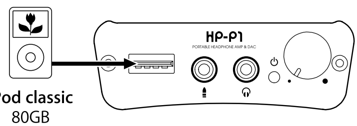
The following are the iPod/iPhone models connectable to the HP-P1 (as of January 2011).

<Note>:The "connectable models" means the models that can transfer digital audio signal to the HP-P1 via the Dock Connector to USB cable.

iPod touch
(the second, third and fourth generations)
iPod classic
iPod nano
(the fourth, fifth and sixth generations)
iPhone 4
iPhone 3GS
iPhone 3G

- For the latest information for connectable iPod/iPhone models, see the Fostex website.
- If your iPod/iPhone is not listed above, see "Connecting an old iPod/iPhone" described below.

Connect the USB (type A) port of the HP-P1 to your iPod/iPhone using the supplied Dock Connector to USB cable.



When the HP-P1 is connected to your iPod/iPhone and the iPod/iPhone recognizes the HP-P1, the display of the iPod/iPhone can show the HP-P1 information as below.

Model HP-P1
Manufacturer Fostex
Serial Number
Version X.XX.XX

<Note>:If the display of your iPod/iPhone does not show the HP-P1 information as above, see "Connecting an old iPod/iPhone" described below.

<Memo>:
- When the HP-P1 is turned on, the headphone jack of the connected iPod/iPhone is disabled.
- When the analog input jack is plugged in, the iPod/iPhone signal is not output from the HP-P1 (the analog input signal takes priority over the iPod/iPhone signal).

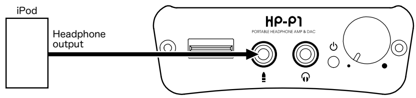
Connecting an old iPod/iPhone

Some iPod/iPhone does not recognize the HP-P1 when it is connected to the HP-P1 using the supplied Dock Connector to USB cable.
In such a case, the display of the iPod/iPhone shows the following message.

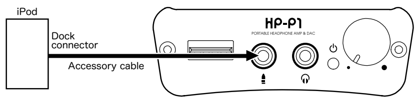
The currently attached
accessory is not supported
by this iPod.

In this case, the iPod/iPhone audio signal cannot be sent to the HP-P1 via the Dock Connector to USB cable.
To send the iPod/iPhone audio signal to the HP-P1, two methods are available.

(1) Connect the headphone output jack of the iPod/iPhone to the analog input jack of the HP-P1.



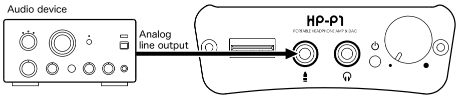
(2) Connect the Dock connector of the iPod/iPhone to analog input jack of the HP-P1 using a "Dock connector to mini phone plug" cable available in the market.



- With method (1) above, the iPod/iPhone digital signal is sent to the HP-P1 via the iPod/iPhone headphone amplifier. On the other hand, with method (2), the iPod/iPhone digital signal is directly sent to the HP-P1 (the iPod/iPhone headphone amplifier is bypassed).

Connecting a general audio source

By connecting an audio device that provides the analog line output to the analog input jack of the HP-P1, you can monitor high quality audio sound via headphones.



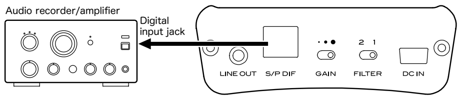
<Memo>:When both the analog input jack and USB connector (type A) are plugged in, the signal from the analog input jack takes priority over the iPod/iPhone signal (the iPod/iPhone signal is not output from the HP-P1).

Connecting a recorder or audio amplifier

In addition to the headphone output, the HP-P1 also provides the [LINE OUT] jack that feeds the analog signal as well as the [S/PDIF] output jack that feeds the S/PDIF digital signal.
By connecting a recorder or audio amplifier to either of these jacks, you can copy iPod/iPhone audio sources or monitor them from a speaker system with fine audio quality.

Using the [S/PDIF] output jack

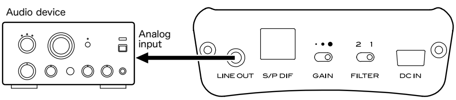
The [S/PDIF] output jack outputs the S/PDIF digital signal that is digital-to-digital converted from an iPod/iPhone digital audio signal received from the USB connector (type A). By connecting a recorder or amplifier that provides the digital input to this jack, you can transfer an iPod/iPhone audio source in digital domain (without converting it to analog). That is, you can make dubbing of iPod/iPhone audio sources or monitor iPod/iPhone from your speaker system with fine audio quality.



Using the [LINE OUT] jack

The [LINE OUT] jack outputs an analog audio signal that is converted from an iPod/iPhone digital audio signal or that is fed to the analog input jack. By connecting a recorder or audio amplifier to this jack, you can make audio dubbing of your iPod/iPhone audio sources or monitor iPod/iPhone from your speaker system.

<Memo>:You cannot control the output level of the [LINE OUT] jack using the power switch/volume control dial.



Turning on or off the power

Turning on the power

To turn on the power, follow the procedure below.

1. Make sure that all the connections between the HP-P1 and external devices are made.

2. Make sure that the internal battery is charged or the [DC-IN] port of the unit is USB-connected to a personal computer.

3. Turn the power switch/volume control dial clockwise until it clicks.

The power is turned on. The power indicator lights in red briefly and then turns to green.
If an iPod/iPhone is connected to the unit, the iPod/iPhone is automatically turned on.

<Memo>:When the battery is exhausted, the power indicator lights in red.

Turning off the power

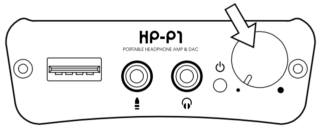
To turn off the power, turn the power switch/volume control dial counterclockwise until it clicks.

Various settings

When you enjoy music via headphones, make the following settings appropriately depending on the circumstance or your preference.

Adjusting the volume

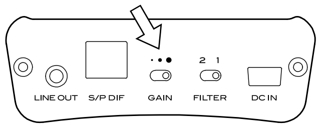
You can adjust the headphone volume using the power switch/volume control.



<Memo>:The power switch/volume control only affects the headphone output level. It does not affect the output level of the [LINE OUT] jack.

Selecting the gain

You can select the gain of the headphone amplifier using the [GAIN] switch.

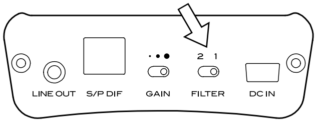


There are three switch positions available. The rightmost position provides the highest gain, while the leftmost position provides the lowest gain. Select the appropriate position depending on the sensitivity of your headphones.

<Memo>:The [GAIN] switch only affects the headphone output. It does not affect the [LINE OUT] jack.

Setting the filter

You can select the digital filter type using the [FILTER] switch depending on your preference.



There are two switch positions; “1” and “2”.
1: Conventional digital filter called “sharp roll-off filter”.
2: AKM’s newly developed digital filter called “minimum delay filter”. It accurately reproduces the original recorded sound without pre-echo.

<Memo>:The [FILTER] switch only affects the headphone output. It does not affect the [LINE OUT] jack.

Specifications

- Headphone output jack (stereo mini jack)
  Maximum output power: 80 mW + 80 mW
  Applicable load impedance: 16 ohms or more
  Frequency response: 20 Hz to 20 kHz +/- 0.3 dB (at 32 ohm load, 80 mW output power)
- [LINE OUT] jack (stereo mini jack)
  Nominal output level: -10 dBV
- Analog input jack (stereo mini jack)
  Maximum input: Approx. 3.0 Vrms
- [S/PDIF] output jack (optical)
  S/PDIF format (IEC 60958-3)
- USB connector (type A) for Dock Connector to USB cable
  For iPod/iPhone connection
  USB Type A
- [DC-IN] port
  USB Type mini B
- Power supply
  Internal lithium-ion battery
- External dimensions
  75 (width) x 25 (height, excluding rubber feet) x 130 (depth, including protrusions) mm
- Weight: Approx. 260 g

* “Made for iPod” and “Made for iPhone,” mean that an electronic accessory has been designed to connect specifically to iPod and iPhone, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, may affect wireless performance.
* iPhone, iPod, iPod classic, iPod nano, iPod shuffle, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries.
* Specifications and appearance are subject to change without notice for product improvement.

Declaration of EC Directive

This equipment is compatible with the EMC Directive (2004/108/EC) - Directive on approximation of member nation's ordinance concerning the electromagnetic compatibility and with the Low Voltage Directive (73/23/EEC) - Directive on approximation of member nation's ordinance concerning electric equipment designed to be used within the specified voltage range.

The Affect of Immunity on This Equipment

The affect of the European Specification EN61000-6-1 (coexistence of electromagnetic waves - common immunity specification) on this equipment are as shown below.

In the electrical fast transient/burst requirements, surge, conducted disturbances by radio-frequency fields, power frequency magnetic field, radiate electromagnetic field requirements and static electricity discharging environment, this could be affected by generation of noise in some cases.

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* Including non-EU countries (as of January 2011)

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